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Introduction: Hypovitaminosis and fat-soluble vitamin deficiency have been reported in adults with ulcerative colitis(UC). A prospective pilot study was undertaken to determine the prevalence of low serum levels of vitamin A in adults with UC.

Methods: Clinical information and serum for vitamin levels were gathered prospectively from 46 patients with ulcerative colitis. Disease activity and disease location were determined for UC patients by Truelove–Witt Index. Serum retinol levels were determined by high-performance liquid chromatography.

Results: The prevalence of hypovitaminosis A (defined as serum vitamin A <20 μg/dl) was 34% in the ulcerative colitis population studied. Serum retinol levels correlated negatively with disease activity($P<0.05$).

Conclusions: Adults with active ulcerative colitis frequently have low serum levels of vitamin A. The severity of disease activity is a useful predictor of risk for hypovitaminosis.

Keywords: Ulcerative colitis, Retinol

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E Poster – [A-10-1026-1]
Flow cytometric analysis of the effect of dimethylsulfone on cell cycle arrest in human cancer cell lines

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Introduction: Dimethylsulfone (MSM) is a dietary supplement to support healthy body. It has been suggested that MSM has a chemopreventive mechanism that affects the interaction of tumor cells with the host immune response. Considering preventive effects of this substance on tumor onset and non-toxic to healthy body we investigated in vitro effects of dimethylsulfone on cell cycle distribution in cancer cell lines.

Materials and methods: Cells were seeded in 25 cm^2 flasks at a density of 1×106 cells/flask. Cells were treated with MSM for 24 h at a range of concentration. After treatment, the DNA content and cell-cycle distribution were determined by flow cytometry. Briefly, cells were trypsinized and harvested, then cells fixed with 70% ice ethanol. Fixed cells were centrifuged and washed with cold PBS, and then stained with DAPI 10 μg/ml. The stained cells were then transferred to flow tubes by passing through a nylon mesh with a pore size of 30 μm.

Results: The percentage of cells in G1, S and G2/M phase was calculated using Partec FloMax software. We observed a dose-dependent effect of MSM on the cell cycle. After 24 h of MSM treatment at different concentrations, cells in the G2/M population increased compared to controls. The effect of MSM on cancer cells appears to be dose-dependent. The higher the dosage, the greater the G2/M population increases.

Conclusion: The results showed that MSM is able to induce a G2/M cell cycle arrest in gastrointestinal cancer cell lines.

Keywords: Dimethylsulfone, Dietary supplement, Cell cycle, Cancer cell lines

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E Poster – [A-10-1152-1]
Effect of glycemic control on prooxidant–antioxidant balance in type 2 diabetic patients and its comparison with healthy subjects

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Introduction: Diabetes is associated with an increased risk of vasculopathy. Hyperglycemia is a major factor in increasing free radicals and oxidative stress. In some studies, it has been hypothesized that vasculopathy may not be affected by glycemic control. In this study, we compared the PAB in well-controlled and poor controlled type 2 diabetic patients and compared it with a sex and age matched healthy control group.

Method: 150 patients including 50 well controlled type 2 diabetic patients (HbA1c 6.9 ± 0.7%, age 50 ± 8), 50 poor controlled type 2 diabetic patients (HbA1c11.7 ± 1.7%, age 49 ± 11) and 50 age and sex matched healthy subjects (age 46 ± 8) were selected for this study. PAB was measured with a novel assay which is based on 3,3′,5,5′-tetramethylbenzidine and its cation.

Result: In poor controlled diabetic patients mean PAB value was significantly higher compared to well controlled diabetic and healthy subjects (90 ± 33, 57 ± 36 and 52 ± 9 HK respectively) (ANOVA, $P<0.0001$).

Conclusion: We concluded the PAB is higher in poor controlled type 2 diabetic patients, showing an elevated oxidative stress. This may show the importance of glycemic control in prevention of cardiovascular events in diabetic patients.

Keywords: Type 2 diabetes, Glycemic control, HbA1c, Prooxidant–antioxidant balance, Cardiovascular disease

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E Poster – [A-10-1153-1]
Comparison of serum oxidized LDL level in healthy and well glycemic controlled type 2 diabetic subjects

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Introduction: Oxidized LDL is a form of low-density lipoprotein (LDL) which has been attacked by oxygen free radicals when it enters to the endothelium. Oxidized LDL (Ox-LDL) is known to promote atherogenesis which is the major cause of cardiovascular disease. This study was conducted to compare the serum oxidized low density